

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.- 51. (cancelled)

52. (currently amended) A composition for the production of an abrasion-resistant and alkali-resistant coating or shaped body ~~with a low energy surface~~, wherein the composition comprises

- (a) a curable binder system comprising at least one organic polymer or oligomer with one or more functional groups, or a precursor thereof,
- (b) at least one fluorinated polymer or oligomer having at least one functional group which is capable of undergoing a chemical reaction with a functional group of the binder system, and
- (c) one or more types of inorganic particles.

53. (previously presented) The composition of claim 52, wherein the at least one functional group of (b) comprises one or more of a $-\text{SO}_3\text{H}$ group, a $-\text{PO}_3\text{H}$ group, an amino group, a carboxyl group and a hydroxyl group.

54. (previously presented) The composition of claim 52, wherein the at least one fluorinated

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polymer or oligomer of (b) comprises at least one of a fluorinated polyether and a fluoroethylene-alkyl vinyl ether copolymer.

55. (previously presented) The composition of claim 52, wherein (c) is present in an amount of from 5 % to 60 % by weight, based on a total weight of (a), (b) and (c).

56. (previously presented) The composition of claim 52, wherein (c) comprises at least one ceramic material.

57. (previously presented) The composition of claim 52, wherein (c) comprises at least one compound selected from one or more of oxides, nitrides, carbides, carbonitrides, silicides and borides.

58. (previously presented) The composition of claim 57, wherein (c) comprises one or more of SiC, B₄C, SiO₂, Al₂O₃, ZrO₂ and TiO₂.

59. (previously presented) The composition of claim 52, wherein (c) comprises at least one abrasive material selected from diamond, granite, pumice, tripel, silicon carbide, emery, alumina, silica, gypsum and boron carbide.

60. (previously presented) The composition of claim 52, wherein (c) comprises surface-modified particles.

61. (previously presented) The composition of claim 60, wherein (c) comprises particles which are modified with one or more groups which comprise an epoxy group or an amine group.

62. (previously presented) The composition of claim 52, wherein (c) comprises particles having a mean particle diameter of from 0.1 μm to 100 μm .

63. (previously presented) The composition of claim 52, wherein (a) comprises at least one of an epoxy resin, a polyol, a polyisocyanate, a polyester, a polyacrylate, a polyamine, a polyamide, a polyimide, a polybenzimidazole and precursors thereof.

64. (previously presented) The composition of claim 52, wherein (a) comprises components which give rise to a polyurethane resin.

65. (withdrawn) The composition of claim 52, wherein (a) comprises components which give rise to a polyepoxide resin.

66. (previously presented) The composition of claim 52, wherein (a) further comprises at least one of a crosslinking agent and a hardener.

67. (previously presented) The composition of claim 66, wherein the at least one of a crosslinking agent and a hardener comprises at least one of an isocyanate group, an acid anhydride group, an amine group and a hydroxyl group.

68. (previously presented) The composition of claim 66, wherein the at least one of a crosslinking agent and a hardener comprises one or more of a di- or tetracarboxylic acid, an anhydride thereof or another derivative thereof as a carboxylic acid component, and at least one of a diamine and a tetramine as an amine component, at least one of the carboxylic acid component and the amine component comprising an aromatic radical.

69. (previously presented) The composition of claim 52, wherein the composition further comprises at least one of a solvent and an additive.

70. (currently amended) A composition for the production of an abrasion-resistant and alkali-resistant coating or shaped body ~~with a low-energy surface~~, wherein the composition comprises

- (a) a curable binder system comprising one or more of an epoxy resin, a polyol, a polyisocyanate, a polyester, a polyacrylate, a polyamine, a polyamide, a polyimide, a polybenzimidazole and precursors thereof,
- (b) at least one fluorinated polymer or oligomer having at least one functional group which is capable of undergoing a chemical reaction with a functional group of the binder system and comprises one or more of a $-\text{SO}_3\text{H}$ group, a $-\text{PO}_3\text{H}$ group, an amino group, a carboxyl group and a hydroxyl group, and
- (c) one or more types of inorganic particles which comprise at least one compound selected from one or more of oxides, nitrides, carbides, carbonitrides, silicides and borides and have a mean particle diameter of from ~~0.4~~ 0.5 μm to ~~100~~ 50 μm .

71. (previously presented) The composition of claim 70, wherein (c) is present in an amount of from 5 % to 60 % by weight, based on a total weight of (a), (b) and (c).

72. (previously presented) The composition of claim 70, wherein (b) comprises at least one of a fluorinated polyether and a fluoroethylene-alkyl vinyl ether copolymer.

73. (previously presented) The composition of claim 70, wherein (c) comprises surface-modified particles.

74. (previously presented) The composition of claim 73, wherein (c) comprises particles which are modified with one or more groups which comprise an epoxy group or an amine group.

75. (currently amended) A composition for the production of an abrasion-resistant and alkali-resistant coating or shaped body ~~with a low-energy surface~~, wherein the composition comprises

- (a) a curable binder system which gives rise to a polyurethane resin or a polyepoxide resin,
- (b) at least one fluorinated polymer or oligomer comprising at least one of a fluorinated polyether and a fluoroethylene-alkyl vinyl ether copolymer and having at least one functional group which is capable of undergoing a chemical reaction with a functional group of the binder system and comprises one or more of a $-\text{SO}_3\text{H}$ group, a $-\text{PO}_3\text{H}$ group, an amino group, a carboxyl group and a hydroxyl group, and
- (c) one or more types of surface-modified inorganic particles which are modified with one or

more groups which comprise an epoxy group or an amine group and comprise at least one compound selected from one or more of oxides, nitrides, carbides, carbonitrides, silicides and borides and have a mean particle diameter of from ~~0.1~~ 1 μm to ~~100~~ 20 μm .

76. (currently amended) A process for producing a substrate having an abrasion-resistant and alkali-resistant coating ~~with a low-energy surface~~, wherein the process comprises applying to the substrate the composition of claim 52 and curing the applied composition.

77. (previously presented) A substrate having an abrasion-resistant and alkali-resistant coating, wherein the coating comprises a cured composition of claim 52.

78. (previously presented) The substrate of claim 77, wherein fluorinated components are uniformly distributed throughout the coating.

79. (previously presented) The substrate of claim 77, wherein the coating exhibits an abrasion value, measured after 1,000 cycles on a Taber abrasion apparatus, of less than 5 mg.

80. (previously presented) The substrate of claim 77, wherein the coating exhibits a contact angle with respect to water, measured on a smooth surface, of at least 80° and a contact angle with respect to hexadecane, measured on a smooth surface, of at least 45° .

81. (currently amended) A substrate having an abrasion-resistant and alkali-resistant

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coating ~~with low-energy surface~~, wherein the coating comprises a cured composition of claim 52 75, has fluorinated components uniformly distributed therein, exhibits an abrasion value, measured after 1,000 cycles on a Taber abrasion apparatus, of not more than 3 mg, and exhibits a contact angle with respect to water, measured on a smooth surface, of at least 80° and a contact angle with respect to hexadecane, measured on a smooth surface, of at least 50°.

82. (currently amended) A process for producing an abrasion-resistant and alkali-resistant shaped body ~~with a low-energy surface~~, wherein the process comprises shaping the composition of claim 52 and curing the shaped composition.

83. (previously presented) An abrasion-resistant and alkali-resistant shaped body, wherein the shaped body comprises a cured composition of claim 52.

84. (previously presented) A method of keeping an object or built structure clean, wherein the method comprises providing the object or built structure with a coating which comprises a cured composition of claim 52 or producing the object or built structure from the composition of claim 52.

85. (new) The composition of claim 52, wherein the at least one fluorinated polymer or oligomer of (b) comprises an oligomer having a weight average molecular weight of from 500 to 3000.

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86. (new) The composition of claim 70, wherein the at least one fluorinated polymer or oligomer of (b) comprises an oligomer having a weight average molecular weight of from 600 to 1500.

87. (new) The composition of claim 52, wherein (a) comprises a first functional group and a second functional group that is reactive with the first functional group and (b) comprises a third functional group that is reactive with the first functional group and wherein a molar ratio of first functional group to second functional group plus third functional group is about 1:1.

88. (new) The substrate of claim 77, wherein the coating remains stable after exposure to a medium of pH 12 for 3 hours at 65°C.